REMARKS/ARGUMENTS

This response is being filed within two (2) months of the mailing of the Office Action dated June 17, 2005.

Claims 1 and 3-38 are pending in the application.

Claims 1, 3, 11, 13, 20 and 22 are currently amended.

Claim 2 was previously cancelled.

Claim Rejections Under 35 USC § 103:

Claims 1 and 3-37 were under 35 USC § 103(a) over US Patent 5,974,360 to Otsuka et al. in view of US Patent 5,615,118 to Frank and further in view of US Patent 5,077,558 to Kuntman.

Claim 1 includes the limitation of generating a warning as a function of said forecast information describing a weather condition and said phase of flight.

The invention as presently recited in claim 1 is patentable over Otsuka, et al., Frank and Kuntman, both individually and in combination.

Otsuka, et al. teaches equipment for weather image prediction. See, e.g., Abstract. Frank teaches an onboard aircraft flight optimization system that includes an onboard performance management computer, a control display unit, an infrared probe, a temperature probe, a weather radar, an inertial navigation system, and comparing apparatus. See, e.g., Abstract.

The Examiner, suggests that Frank further discloses an onboard control display unit that includes lights, and keys for displaying data and inserting commands related to different phases of flight, using the term "modes." For support, the Examiner cites Frank at column 8, lines 38-59, which reads as follows:

> Still yet another object of the present invention is to provide a onboard aircraft flight path optimization system wherein the onboard control display unit further includes an onboard climb light, an onboard cruise light, and an onboard descent light to indicate flight mode of the onboard performance management system computer. Column 8, lines 38-43.
>
> Yet still another object of the present invention is to provide a onboard aircraft flight path optimization system wherein the onboard control display unit further includes an onboard climb key to display climb data and permit insertion of climb commands. Column 8, lines 44-48.

> Still yet another object of the present invention is to provide a onboard aircraft flight path optimization system wherein the onboard control display unit further includes an onboard cruise key to display cruise data and permit insertion of cruise speed commands. Column 8, lines 49-54.
>
> Yet still another object of the present invention is to provide a onboard aircraft flight path optimization system wherein the onboard control display unit further includes an onboard descent key to display descent data and permit insertion of decent rates and speeds. Column 8, lines 55-59.

However, Frank clearly discloses only "an onboard descent light to indicate flight mode." Column 8, lines 38-43 (above).

Furthermore, Frank discloses the onboard descent (DES) light 56 that indicates the flight mode of the onboard performance management system computer 26. Column 13, lines 57-60, which reads as follows:

> An onboard climb (CLB) light 52, an onboard cruise (CRZ) light 54, and an onboard descent (DES) light 56 **indicate** the flight mode of the onboard performance management system computer 26. Column 13, lines 57-60 (emphasis added).

Frank discloses the onboard descent (DES) light 56 that *only* indicates the flight mode of the onboard performance management system computer 26. Frank does not disclose or suggest doing anything as a function of phase of flight, as recited in claim 1. Rather, Frank teaches only *indicating* the flight mode of the onboard performance management system computer 26. Column 8, lines 38-43; column 13, lines 57-60.

Other cited portions of Frank fail to provide these deficiencies. Frank teaches "an onboard climb key to display climb data and permit insertion of climb commands." Column 8, lines 44-48.

Frank teaches "an onboard cruise key to display cruise data and permit insertion of cruise speed commands." Column 8, lines 49-54.

Frank teaches "an onboard descent key to display descent data and permit insertion of decent rates and speeds." Column 8, lines 55-59.

As shown, Frank clearly teaches only display of data and insertion of commands, *without* any reference to "mode" or phase of flight, as recited in claim 1.

Thus, neither Otsuka, et al. nor Frank disclose or suggest generating a warning as a function of said forecast information describing a weather condition and said phase of flight, as recited in claim 1.

Rather, the Examiner must rely upon Kuntman for these further limitations.

However, Kuntman also fails to disclose or suggest generating a warning as a function of said forecast information describing a weather condition and said phase of flight, as recited in claim 1.

Therefore, Kuntman also fails to provide the deficiencies of Otsuka, et al. and Frank. Kuntman teaches an airborne wind shear detection radar incorporated into an existing weather radar with turbulence detection capability. Column 2, lines 7-12.

Kuntman teaches that, "Wind shear detection can be incorporated as a mode of operation of the weather radar and therefore could be activated during the landing and takeoff phases of flight." Column 2, lines 12-15.

Thus, Kuntman teaches exactly away from generating a warning as a function of forecast information describing a weather condition and said phase of flight, as recited in claim 1. Rather, Kuntman teaches disabling the weather radar during the landing and takeoff phases of flight, as shown by a full reading of the text of Kuntman, as follows:

> FIG. 2 illustrates a block diagram of a wind shear detection weather radar in accordance with a preferred embodiment of the present invention wherein wind shear detection capabilities are incorporated into an existing weather radar with turbulence detection capability. Wind shear detection can be incorporated as a mode of operation of the weather radar and therefore could be activated during the landing and takeoff phases of flight. During the cruise, climb and approach phases of flight the radar could be operated in any of its normal modes currently available. Column 2, lines 7-17 (emphasis added).

Thus, Kuntman teaches (1) wind shear detection capabilities are incorporated into an existing weather radar with turbulence detection capability; (2) wind shear detection could be activated during the landing and takeoff phases of flight; and (3) during the cruise, climb and

approach phases of flight the radar could be operated in any of its normal modes currently available. Furthermore, wind shear detection is a different operation of the radar from weather detection. See, e.g., column 2, line 30-column 4, line 26.

Thus, as taught by Kuntman, weather detection and wind shear detection are different and mutually exclusive operations of the weather radar.

Thus, Kuntman suggests (1) operating wind shear detection during the landing and takeoff phases of flight, but (2) operating weather radar in its "normal modes" during cruise, climb and approach phases of flight. Kuntman suggests operating different modes of the radar during different phases of flight.

However, Kuntman fails to disclose or suggest generating a warning as a function of said forecast information describing a weather condition and said phase of flight. Rather, Kuntman teaches that an alert could be "generated any time a severe wind shear probability is detected." Column 4, lines 27-29. Thus, Kuntman does NOT tie generating an alert to phase of flight, as recited in claim 1. Rather, Kuntman only ties generating an alert to if the wind shear detection mode of the radar is being operated. Kuntman teaches generating an alert (1) if the wind shear detection mode of the radar is being operated, and (2) if the threat is a "severe wind shear probability." Phase of flight is not even relevant to generating an alert as taught by Kuntman. Kuntman only teaches best practice is to operate the wind shear mode during critical phases of flight. It is not operating as a function of phase of flight merely to choose to operate the radar in a different mode during different phases of flight, as taught by Kuntman.

As taught by Kuntman, if the wind shear mode is operating, an alert is generated; if it is not operating, no alert is generated. Thus, Kuntman only teaches generating an alert as a function of turning the wind shear mode ON or OFF, not as a function of phase of flight, as recited in claim 1.

Furthermore, Kuntman teaches that wind shear detection and weather detection are different and mutually exclusive operations of the weather radar. See, e.g., column 2, line 30-column 4, line 26.

Thus, as taught by Kuntman, only wind shear is operated during critical phases of flight. Weather detection is not even operated during critical phases of flight. As taught by Kuntman, an alert is only generated as a function of wind shear detection, and Kuntman fails to disclose or

suggest generating any warning as a function of said forecast information describing a weather condition, as recited in claim 1.

Accordingly, the Examiner is mistaken in supposing that the present invention, as recited in claim 1, would have been obvious over the teachings of Otsuka, et al. and Frank in view of Kuntman. Rather, Frank only indicates the flight mode of the onboard performance management system computer 26. Column 13, lines 57-60. Kuntman only teaches operation of wind shear detection during critical phases of flight, and generating an alert any time the wind shear mode is operated, not as a function of phase of flight, as recited in claim 1.

However, the Examiner argues that Kuntman discloses "generating a warning as a function of said forecast information describing a weather condition and said phase of flight," as recited in claim 1, by teaching generating alerts only when the wind shear detection device is activated and wind shear is detected, and the wind shear detection device is activated only in critical phases of flight.

The Applicant *strongly* disagrees with the Examiner's interpretation for all of the reasons state above.

However, in the interests of furthering a protracted prosecution, the Applicant at this time elects to amend claim 1 to include "comparing" said forecast information describing a weather condition and said phase of flight, and generating a warning as a function of this "comparing."

Obviously, Otsuka, et al., Frank and Kuntman all fail to disclose or suggest "generating a warning as a function of comparing said forecast information describing a weather condition and said phase of flight, as presently recited in claim 1. Even Kuntman cannot be said to "compare" forecast information with the phase of flight because Kuntman only teaches *activating* the wind shear detection device. As taught by Kuntman, the wind shear detection device is ON or OFF during a phase of flight. Kuntman does not teach *comparing* its ON or OFF status with the phase of flight.

Therefore, the Applicant believes the invention is clearly patentable as presently recited in amended claim 1.

For each of the above reason, claim 1 is believed to be allowable, and reconsideration and allowance is respectfully requested.

Claims 3-12 are allowable at least as depending from allowable claim 1.

Furthermore, claim 3 is amended, whereby the rejection is made moot.

Additionally, claim 3 is now allowable independently of claim 1 as reciting the generating a warning as a function of forecasting an intensity of a storm cell sufficient to threaten safety of flight; and generating a warning as a function of a predicted intersection with said storm cell threatening said safety of flight. The Applicant believes Otsuka, et al., Frank and Kuntman all fail to disclose or suggest any generating a warning as a function of a predicted intersection with said storm cell threatening said safety of flight, as presently recited in claim 3.

For each of the above reason, claim 3 is believed to be allowable, and reconsideration and allowance is respectfully requested.

Claim 7 is allowable independently of claim 1 as reciting generating a warning as a function of determining an intensity of said weather condition at said coincidence, and comparing said intensity of said weather condition with said intended phase of flight at said coincidence. The Applicant believes Otsuka, et al., Frank and Kuntman all fail to disclose or suggest any generating a warning as a function of both (1) determining an intensity of said weather condition at said coincidence, and (2) comparing said intensity of said weather condition with said intended phase of flight at said coincidence, as previously recited in claim 7.

For each of the above reason, claim 7 is believed to be allowable, and reconsideration and allowance is respectfully requested.

Furthermore, claim 11 is amended, whereby the rejection is made moot.

Additionally, claim 11 is now allowable independently of claims 1 and 3 as reciting the generating a warning as a function of determining a threat to the safety of flight. The Applicant believes Otsuka, et al., Frank and Kuntman all fail to disclose or suggest any generating a warning as a function of determining a threat to the safety of flight as a function of said forecasted intensity of said storm cell storm cell in combination with an intended phase of flight of the aircraft at said predicted intersection with said storm cell, as presently recited in claim 11.

For each of the above reason, claim 11 is believed to be allowable, and reconsideration and allowance is respectfully requested.

Amended presented claim 13 differs in scope from allowable claim 1. However, the above arguments directed to claim 1 are sufficiently applicable to claim 13 as to make repetition

unnecessary. Thus, for each of the reasons above, claim 13 is believed to be allowable over the cited art. Claims 14-19 are allowable at least as depending from allowable claim 13.

Amended presented claim 20 differs in scope from allowable claim 1. However, the above arguments directed to claim 1 are sufficiently applicable to claim 20 as to make repetition unnecessary. Thus, for each of the reasons above, claim 20 is believed to be allowable over the cited art. Claims 21-28 are allowable at least as depending from allowable claim 20.

Claim 29, as previously presented, also differs in scope from allowable claim 1. However, the above arguments directed to claim 1 are also sufficiently applicable to claim 29 as to make repetition unnecessary. Thus, for each of the reasons above, claim 29 is also believed to be allowable over the cited art. Claims 30-38 are allowable at least as depending from allowable claim 29.

The claims now being in condition for allowance, reconsideration and allowance are respectfully requested.

If the Examiner has questions or wishes to discuss any aspect of the case, the Examiner is encouraged to contact the undersigned at the telephone number given below.

Respectfully submitted,

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